A STUDY OF RETAIL INVESTORS BEHAVIOUR TOWARDS EQUITY INVESTMENT IN STOCK MARKET- A Case Study of Mumbai Region

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SYNOPSIS

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1. Introduction

Investing

Advancement in education has resulted in people becoming employable thus improving their standard of living. This has led them to plan their finances effectively and has boosted investment in different avenues. The world economic conditions are such that it becomes indispensable for an individual to not have financial knowledge. Because judicious financial decisions can be taken only when financial knowledge is put to use in managing money.

The statistics from the survey conducted by Standard & Poor in the year 2015 revealed that India's financial literacy was a mere 24% in comparison to other countries which had almost 65% adults who were financially literate. This meant that the rest of the population in India lacked the basic knowledge about the financial concepts. This appalling number draws attention to the requirement of financial literacy programs in the country as lack of financial knowledge can in turn harm the economy. Thus before the awareness about the financial options it is vital to first know the importance of saving and managing funds in a constructive way.

Saving helps in bridging the gap between earning and spending. Investment is a broader perspective and is not just bound by traditional investment. People in earlier times dint save for their future. Of late this scenario has been changing, people have started saving and investing their funds as they have realized the importance of doing so. These not only are required to meet unpredicted financial emergencies and contingencies but they also help in making a person financially independent.

With the world turning digital financial literacy can be accelerated with the help of technology, as it promotes independent learning. To improve the financial situation it becomes imperative to save as well as invest. Financial worries can only diminish when these savings are put to correct use for growing wealth. People have now learnt the art of multiplying their saving by investing them and making their money work for them.

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For the purpose of financial planning, investing rightly is quintessential. It not only accelerates the financial stability of an individual by generating yield for the future but also contributes to economic development of the country. Rotation of funds initiates considerable returns rather than having stagnant money kept under the mattress, in pockets or the wardrobe.

Only when the funds are prudently stashed in the right financial products they will be able to grow and multiply. Investing wisely not only aids in achieving financial goals and objectives but makes the future life better with wise investment decisions. Early investing helps in capital appreciation and maximization of wealth by compounding effect thus generating a huge corpus of funds. This acts as a catalyst in the growth and multiplication of funds.

Thus with abundant investment options and instruments available there has been a proliferation of investors pouring into the capital market.

There are several queries that may come across the mind of the investor. These are the questions that mainly need to be addressed.

Why is it necessary to invest?

How long should the gestation period be?

How to go about investing?

As the above questions go the process of investing is not as simple but may be driven by different factors which makes the concept of investing subjective ie differing from person to person. This study not only identifies the concerns of investors of investing but also addresses them.

Dynamics of the stock market

India as a market compared to other developed countries is at a nascent stage as the capital market is accessed by only a small part of the population. Although the stock market prospects do remain hazy there has been an improvement in the investment ecosystem over the years, providing a platform to investors to maximize wealth as well as business enterprises to raise funds. Besides this it has also been playing a pivotal role in employment generation by creating jobs such as brokers, financial advisors, analyst, and also generating revenue for business houses and channels as well as the government.

The development of this market has also propelled research and curriculum development in this field and has been a reason for India to make a mark globally. It is considered to be a reflection of the country's economy and financial stability.

Although investing in the stock market makes it an unconventional avenue but it gives an option to the investor to exit as per his convenience. Besides this the transparency and uncomplicated procedures have made it accessible for anyone with a demat account.

In a country like India where there are more than 5000 shares listed in the country's leading stock exchanges the BSE and NSE it is bound to impact the country's economy. As per the reports of the Mint more than one fifth of stock market investors are in Maharashtra. Mumbai has been the financial capital as major financial institutions are located in the city.

Known as an employment hub which is thronged by citizens from different parts of the country it is a city that never sleeps or maximum city, as citizens here work for the supreme number of hours in the world compared to 77 cities in the world, which comes upto an average of 3,314.7 hours a year as per the price earnings report of 2018 by UBS a Swiss bank.

Investment behaviour

As per the SEBI there has been a paradigm shift in the investing perception and pattern of investors as there is an influx in the people moving and diversifying from traditional instruments to the financial markets. This rally of investors in the country's financial market can be attributed to the changing habits of the erstwhile risk averse middle income group in India which soared the Sensex in the year 2017.

There has been a splurge in the number of investors in the stock market due to the underperformance of the traditional asset and the fall in interest rates over the years. Besides this the growth in the income levels as well as financial inclusion policies have also contributed to introduce investors into the capital market.

The stock market is a place where investors usually flock when the index is rising and exit when the index starts falling.

Thus it is not that investors can be rational at all times but their decisions may be also driven by emotions.

Retail investors in Mumbai

As per the statistics of the SEBI in the year 2018-19 Mumbai's share is pegged at 66.2% of the total turnover in the equity cash segment of the NSE. Mumbai is considered to be the financial capital and city's share in the turnover pie is driven by the fact that majority of the institutional trades and computer based algorithmic trading is initiated from the financial capital.

The two major stock exchanges the NSE and BSE are functioning and located in Mumbai. Besides this Mumbai also hosts the SEBI touted as the regulator of exchanges as well as two important depositories ie the NSDL and CDSL as well as the RBI.

- As per the reports of the NSDL in 2018-19 it held 185 lakh demat accounts of investors which was the highest in the decade.
- Mumbai in the year 2010-11 as per the reports of NSDL the city of Mumbai alone had around 11 lakh active demat accounts. There has been a rising trend in the demat accounts opened every year.

Besides in the year 2016 after demonetization more households preferred the stock markets. With swift procedures and easy access to stocks the number of demat accounts opened have increased exponentially.

Mumbai in its contribution to productivity (GDP) as per the statics of World Bank in the year 2008 ranked second among the metropolitan cities in the lower middle income groups and was estimated to be 11^{th} amongst urban economies in its growth rate in the year 2025.

In this study the researcher studies the behaviour of retail investors so as to answer questions like the sources of information that investors are inclined to while investing in stocks, their preferences, their investment strategies, factors that effect mindset and their decision making.

Thus it becomes imperative to study the investor behaviour as it will give an outlook at what an investor looks for in an instrument and will help in the burgeon of new financial products.

Mumbai city covers an area of 157 sq km consisting of 9 wards. It expands from Colaba in the southern part of the city to the northern areas of the city like Sion and Mahim and bustling with people from various cultures.

2. Need and Significance

Investors in the stock market are growing by the day. It is very necessary to know what makes the stock market an attractive avenue and attracts the retail investors towards it. The main purpose of this study is to highlight the behaviour of retail investors in Mumbai towards equity investment. It will also help to comprehend the factors that investors consider vital when investing in equities.

Thus this study attempts not only to understand the behaviour of investors but also provides recommendations, so that retail investors can be alert and take judicious decisions while investing in equities. Thereby analysing the outlook of the investors while investing in this market.

3. Scope

The present study is an attempt to understand the behaviour of retail investors who invest in equity shares confined to the city of Mumbai. The study on equity investment by retail investors will help to understand the investment pattern, investment objectives and the investor behavior towards equities. It will also help investors analyse the trends in the market and then take better investment decisions. This study is important, as it will not only help existing investors in decision making while investing in the stock market but also will help new investors venturing into the stock market to make the right choices.

Thus this study would be of immense help to investors, policy makers as well as business for future reference.

4. Limitations

In the study the researcher faced physical limitations as well as constraints of cost and time. The decisions and preferences of retail investors may vary according to their capacity to take risk as well as their experiences. The study was restricted only to the city of Mumbai. The findings and results of this study cannot be generalized as they were based on the sample respondents of the specific area.

5. Objectives

The objectives of this research are

1. To study the relationship between demographic factors like age, income level, gender, education level and investment decision.

2. To study the relationship between period of experience in the stock market and investment pattern.
3. To identify the sources of information when investing in equities.
4. To examine the key attributes involved in decision making when investing in equities.
5. To study the investment preferences of retail investors in Mumbai.
6. To offer suitable suggestions to investors for framing investment strategies and enhancing investor participation.

6. Hypothesis

HO-There is no significant influence of demographic factors like age, gender, income level, education level on investment objectives.

H1-There is significant influence of demographic factors like age, gender, income level, education level on investment objectives.

HO-Pattern of investment is not influenced by demographic factors like age, gender, income level and education level.

H1- Pattern of investment is influenced by demographic factors like age, gender, income level and education level.

HO-Period of market experience has no significant influence on investment pattern.

H1-Period of market experience has significant influence on investment pattern.

HO-There is no significant association between sources of information and investment pattern.

H1-There is significant association between sources of information and investment pattern.

HO-Retail investors do not prefer equity investment to other investment avenues.

H1-Retail investors prefer equity investment to other investment avenues.

7. Research methodology

Mumbai is a city where there exists vast financial knowledge amongst the people and hence was chosen as the area of study. The present study is an analytical study of retail investors behaviour towards equity investment on the stock market. This is a field survey of descriptive nature. Therefore, the researcher has adopted a model based primary and secondary data.

Primary data

The researcher has selected primary survey for the purpose of collecting primary data which forms the core part of this study. The primary data has been collected with the help of a structured questionnaire specifically designed for this purpose. The researcher has prepared questions, sufficiently enough to cover details regarding the investors demographics like age, income level, gender, education level, investment decision and socio-economical culture. Primary data has been collected from Mumbai region by use of

- Questionnaire
- Personal interviews
- Observation and personal visits

Primary data collection will help to collect first-hand information

Secondary data

The secondary data has been collected from sources already existing like -

- Research Journals
- Newspapers
- Periodicals
- Magazines
- Government Publications
- SEBI annual reports
- Thesis
- Conference papers
- Stock Exchange Publications
- Websites

Statistical method used – The collected data has been properly classified and analysed with the help of statistical techniques such as –

- Tools for hypothesis testing such as Chi-Square test, Kruskal – Wallis, Garrett Ranking
- Graphs – For graphical presentation of data.
- Tabulation – To tabulate data in tabular form for analysis

Sample Design –

The present study is an empirical survey of descriptive type. Therefore, the researcher has used research methodology to suit an empirical survey. The method of stratified sampling is used in the study.

Due to time and cost constraint, the research would be confined to Mumbai region only. The universe consist of retail investors having equity investment who are 18 and above in the city of Mumbai. The sample size of 1000 retail investors were considered for the study randomly chosen from the list of investors from stock brokers and financial advisors residing in the city of Mumbai.

The period of study is from 2010-11 to 2019-2020.

8. Data interpretation

This study analyses the behaviour of retail investors investing in the stock market in the Mumbai region. For the purpose of the study the data is collected and interpreted based on the objectives and the hypothesis. The information collected from the study area is tabulated and analysed and conclusions are drawn.

9. Chapterisation

The study is organized in the following way

1) Introduction and Research Design of the study

This chapter gives an extensive overview of the stock market and the various concepts related to it. It gives a description about the financial system, vital aspects of investing and also addresses the predicaments of investing. The participants involved in the stock market as well as the recent developments that it has undergone have also been explained in detail.

This chapter also describes the research methodology employed in the study, the objectives of the study, hypothesis of the study, the sample and sample design, limitations

and future scope of the study. It also gives an outline of the chapter scheme carried by the researcher in the course of research.

2) Review of Literature

The second chapter is aimed at giving an elaborate view of the studies carried out in India and abroad in this area. The review highlights the various approaches on equity investment and identifies the research gap in this area.

3) Profile of retail investors in Mumbai region

This chapter gives a brief view of the geographical area covered in the study. It also describes the demographic profile of retail investors in Mumbai region. Mumbai lies on the west coast of India in Maharashtra state. Mumbai being the financial capital of India makes it a viable and important area for this study.

4) Investment behaviour of retail investors

It identifies the need for investing as well as dilemmas faced by investors, risk profiling, the traits that effect decision making and reasons for being averse to investing thus giving an overview of investment behavior.

5) Investor decision making and perception

This chapter exhibits the investment avenues available to retail investors. It also describes the essential aspects of the stock exchange including groups of shares, sectors of the stock market as well as the players on the stock market and other related areas.

6) Analysis and Interpretation of data

In this chapter the data collected from retail investors is analysed in detail and is explained with the help of demographic variables like age, gender, income and level of education. A thorough and detailed survey was conducted and with the help of statistical techniques, have been presented and interpreted through graphs and charts.

7) Summary, Conclusions and Recommendations

This is the concluding chapter which gives a summary of the findings, conclusions, and it also list down suggestions for further studies in this field.

10. Summary

The following summary is derived from the study

To understand and establish interdependence of various factors leading to equity investment, the following non-parametric statistical tool are used.

- Chi-Square Analysis
- Kruskal – Wallis
- Garrett Ranking

Research Hypotheses

H_0: There is no significant influence of demographic factors like age, gender, income level, education level on investment objectives.

H_1: There is significant influence of demographic factors like age, gender, income level, education level on investment objectives

To test above hypothesis we have used chi-square independence test, as our data collected through questionnaire and interviews is of qualitative nature we are using non parametric statistical test for testing our research hypothesis.

Research hypotheses are further subdivided into various statistical hypothesis in order to understand the interplay of various factors on to the decision pertaining to share market investment.

Independent Variables (Demographic Features)	**Dependent Variables**	**Chi-Square Statistics**	**Df**	**P-Val**	**Result**
Gender	Reasons for investing in the Share Market [Capital Appreciation]	128.525	4	0.00	Significant
Gender	Reasons for investing in the Share Market [Easy Liquidation]	68.643	4	0.00	Significant
Gender	Reasons for investing in the Share Market [Return on investment (Dividends)]	19.651	4	0.00	Significant
Gender	Reasons for investing in the Share Market [Buying Other Assets]	33.455	4	0.00	Significant
Gender	Reasons for investing in the Share Market [Funding Education]	52.974	4	0.00	Significant

Gender	Reasons for investing in the Share Market [Other Reasons]	97.341	4	0.00	Significant

Independent Variables (Demographic Features)	**Dependent Variables**	**Chi-Square Statistics**	**Df**	**P-Val**	**Result**
Age	Reasons for investing in the Share Market [Capital Appreciation]	107.154	12	0.00	Significant
Age	Reasons for investing in the Share Market [Easy Liquidation]	166.605	12	0.00	Significant
Age	Reasons for investing in the Share Market [Return on investment (Dividends)]	76.516	12	0.00	Significant
Age	Reasons for investing in the Share Market [Buying Other Assets]	196.532	12	0.00	Significant
Age	Reasons for investing in the Share Market [Funding Education]	187.882	12	0.00	Significant
Age	Reasons for investing in the Share Market [Other Reasons]	74.755	12	0.00	Significant

Independent Variables (Demographic Features)	**Dependent Variables**	**Chi-Square Statistics**	**Df**	**P-Val**	**Result**
Education Qualification	Reasons for investing in the Share Market [Capital Appreciation]	215.248	12	0.00	Significant
Education Qualification	Reasons for investing in the Share Market [Easy Liquidation]	146.257	12	0.00	Significant
Education Qualification	Reasons for investing in the Share Market [Return on investment (Dividends)]	73.853	12	0.00	Significant
Education Qualification	Reasons for investing in the Share Market [Buying Other Assets]	105.357	12	0.00	Significant

Education Qualification	Reasons for investing in the Share Market [Funding Education]	151.607	12	0.00	Significant
Education Qualification	Reasons for investing in the Share Market [Other Reasons]	70.462	12	0.00	Significant

Independent Variables (Demographic Features)	**Dependent Variables**	**Chi-Square Statistics**	**Df**	**P-Val**	**Result**
Income Level (yearly)	Reasons for investing in the Share Market [Capital Appreciation]	201.048	12	0.00	Significant
Income Level (yearly)	Reasons for investing in the Share Market [Easy Liquidation]	192.727	12	0.00	Significant
Income Level (yearly)	Reasons for investing in the Share Market [Return on investment (Dividends)]	72.627	12	0.00	Significant
Income Level (yearly)	Reasons for investing in the Share Market [Buying Other Assets]	90.233	12	0.00	Significant
Income Level (yearly)	Reasons for investing in the Share Market [Funding Education]	163.333	12	0.00	Significant
Income Level (yearly)	Reasons for investing in the Share Market [Other Reasons]	60.415	12	0.00	Significant

The researcher wants to test the association between demographic factors and objectives of investing in the stock market. Hence researcher has undertaken Chi-Square cross tabulation analysis (goodness of fit). If the Chi-Square value is greater than critical chi-square value obtained from Chi-square distribution based on degrees of freedoms then we reject the null hypothesis of no significant association between the observed two variables and we can say there is significant association. Conversely if we get the chi-square value less than the critical chi-square value we fail to reject the null hypothesis and conclude that there is no association between the observed variables. As researcher is testing at the significance level of 99% P-value less than 0.01 is considered as significant. Thus we can infer that if our p-value for particular

testing of hypothesis is less than 0.01 then we reject the null hypothesis. Moreover from our above test results it is evidently clear that there is significant influence of demographic factors on the investment objectives, as over almost all the variables are significantly impacting the dependent variables.

H_0: Pattern of investment is not influenced by demographic factors like age, gender, income level and education level.

H_1: Pattern of investment is influenced by demographic factors like age, gender, income level and education level.

Independent Variable	**Dependent Variable**	**Chi-Square Statistics**	**DF**	**P-Val**	**Significance (99%)**
Gender	Amount Currently Blocked in Shares (Equities)	20.379	3	0.00	Significant
Gender	Number of Companies that Make Your Portfolio	30.672	2	0.00	Significant
Gender	What is the Annual Percentage of Profit made by You by Investing in Shares	15.046	3	0.00	Significant
Gender	Type of Stocks that You Associate Yourself with/Prefer	88.995	3	0.00	Significant
Gender	When You Invest in Equity Market You	68.62	3	0.00	Significant
Gender	Your Investment in Equities Usually Comprises of Investment for	5.584	3	0.13	Insignificant
Age	Amount Currently Blocked in Shares (Equities)	121.451	9	0.00	Significant
Age	Number of Companies that Make Your Portfolio	96.301	6	0.00	Significant
Age	What is the Annual Percentage of Profit made by You by Investing in Shares	121.295	9	0.00	Significant
Age	Type of Stocks that You Associate Yourself with/Prefer	31.347	9	0.00	Significant
Age	When You Invest in Equity Market You	106.382	9	0.00	Significant
Age	Your Investment in Equities Usually Comprises of Investment for	104.644	9	0.00	Significant

Independent Variable	Dependent Variable	Chi-Square Statistics	DF	P-Val	Significance (99%)
Education Qualification	Amount Currently Blocked in Shares (Equities)	143.103	9	0.00	Significant
Education Qualification	Number of Companies that Make Your Portfolio	117.188	6	0.00	Significant
Education Qualification	What is the Annual Percentage of Profit made by You by Investing in Shares	49.617	9	0.00	Significant
Education Qualification	Type of Stocks that You Associate Yourself with/Prefer	66.88	9	0.00	Significant
Education Qualification	When You Invest in Equity Market You	84.237	9	0.00	Significant
Education Qualification	Your Investment in Equities Usually Comprises of Investment for	32.546	9	0.00	Significant
Income Level (yearly)	Amount Currently Blocked in Shares (Equities)	154.228	9	0.00	Significant
Income Level (yearly)	Number of Companies that Make Your Portfolio	62.194	6	0.00	Significant
Income Level (yearly)	What is the Annual Percentage of Profit made by You by Investing in Shares	161.284	9	0.00	Significant
Income Level (yearly)	Type of Stocks that You Associate Yourself with/Prefer	127.313	9	0.00	Significant
Income Level (yearly)	When You Invest in Equity Market You	53.667	9	0.00	Significant
Income Level (yearly)	Your Investment in Equities Usually Comprises of Investment for	84.336	9	0.00	Significant
Gender	Sectors Considered for Investing [I.T Sector]	32.331	4	0.00	Significant
Gender	Sectors Considered for Investing [F.M.C.G Sector]	35.908	4	0.00	Significant
Gender	Sectors Considered for Investing [Banking Sector]	51.29	4	0.00	Significant
Gender	Sectors Considered for Investing [Metal Sector]	127.517	4	0.00	Significant
Gender	Sectors Considered for Investing [Automobile Sector]	34.161	4	0.00	Significant

Independent Variable	Dependent Variable	Chi-Square Statistics	DF	P-Val	Significance (99%)
Gender	Sectors Considered for Investing [Other Sectors]	39.811	4	0.00	Significant
Age	Sectors Considered for Investing [I.T Sector]	57.38	12	0.00	Significant
Age	Sectors Considered for Investing [F.M.C.G Sector]	105.395	12	0.00	Significant
Age	Sectors Considered for Investing [Banking Sector]	156.039	12	0.00	Significant
Age	Sectors Considered for Investing [Metal Sector]	120.599	12	0.00	Significant
Age	Sectors Considered for Investing [Automobile Sector]	98.004	12	0.00	Significant
Age	Sectors Considered for Investing [Other Sectors]	105.099	12	0.00	Significant
Education Qualification	Sectors Considered for Investing [I.T Sector]	86.335	12	0.00	Significant
Education Qualification	Sectors Considered for Investing [F.M.C.G Sector]	222.33	12	0.00	Significant
Education Qualification	Sectors Considered for Investing [Banking Sector]	88.684	12	0.00	Significant
Education Qualification	Sectors Considered for Investing [Metal Sector]	124.825	12	0.00	Significant
Education Qualification	Sectors Considered for Investing [Automobile Sector]	120.436	12	0.00	Significant
Education Qualification	Sectors Considered for Investing [Other Sectors]	119.327	12	0.00	Significant
Income Level (yearly)	Sectors Considered for Investing [I.T Sector]	98.115	12	0.00	Significant
Income Level (yearly)	Sectors Considered for Investing [F.M.C.G Sector]	185.366	12	0.00	Significant
Income Level (yearly)	Sectors Considered for Investing [Banking Sector]	62.405	12	0.00	Significant
Income Level(yearly)	Sectors Considered for Investing [Metal Sector]	147.107	12	0.00	Significant
Income Level(yearly)	Sectors Considered for Investing [Automobile Sector]	54.722	12	0.00	Significant
Income Level (yearly)	Sectors Considered for Investing [Other Sectors]	119.251	12	0.00	Significant

The researcher wants to test the association between demographic factors and investment pattern. Hence researcher has undertaken Chi-Square cross tabulation analysis (goodness of fit). If the Chi-Square value is greater than critical chi-square value obtained from Chi-square distribution based on degrees of freedoms then we reject the null hypothesis of no significant association between the observed two variables and we can say there is significant association. Conversely if we get the chi-square value less than the critical chi-square value we fail to reject the null hypothesis and conclude that there is no association between the observed variables. As researcher is testing at the significance level of 99% P-value less than 0.01 is considered as significant. Thus we can infer that if our p-value for particular testing of hypothesis is less than 0.01 then we reject the null hypothesis. Moreover from our above test results it is evidently clear that there is significant influence of demographic factors on the investment decisions, as almost all the variables are significantly impacting the dependent variables.

H_0: Period of market experience has no significant influence on investment pattern
H_1: Period of market experience has significant influence on investment pattern

In our particular case we have used Kruskal-Wallis test to see whether there is significant difference between the responses relating to investment pattern in different groups of variables for e.g. investment experience. Investment experience is measured on a likert scale from very less to very high. etc.

Ranks

Dependent Variable	Investing Experience (Independent Variable)	N	Mean Rank
Amount Currently Blocked in Shares (Equities)	Very Less	714	482.53
	Less	156	470.83
	High	70	700.94
	Very High	60	557.65

	Total	1000	
Number of Companies that Make Your Portfolio	Very Less	714	488.64
	Less	156	508.13
	High	70	584.29
	Very High	60	524.00
	Total	1000	
What is the Annual Percentage of Profit made by You by Investing in Shares	Very Less	714	490.89
	Less	156	517.35
	High	70	492.05
	Very High	60	580.89
	Total	1000	
Type of Stocks that You Associate Yourself with/Prefer	Very Less	714	474.66
	Less	156	584.67
	High	70	457.73
	Very High	60	639.07
	Total	1000	
When You Invest in Equity Market You	Very Less	714	506.49
	Less	156	443.53
	High	70	472.06
	Very High	60	610.52
	Total	1000	
Your Investment in Equities Usually Comprises of Investment for	Very Less	714	470.65
	Less	156	610.96
	High	70	594.21
	Very High	60	459.21
	Total	1000	

Test Statistics

Dependent Variables	**Chi-Square**	**df**	**Asymp. Sig.**
Amount Currently Blocked in Shares (Equities)	57.710	3	.000
Number of Companies that Make Your Portfolio	24.313	3	.000

What is the Annual Percentage of Profit made by You by Investing in Shares	9.479	3	.024
Type of Stocks that You Associate Yourself with/Prefer	38.018	3	.000
When You Invest in Equity Market You	19.327	3	.000
Your Investment in Equities Usually Comprises of Investment for	42.142	3	.000

Kruskal-Wallis follows the Chi-Square distribution as it is applied for non-parametric data. Hence If the Chi-Square value is greater than critical chi-square value obtained from Chi-square distribution based on degrees of freedoms then we reject the null hypothesis of no significant association between the observed two variables and we can say there is significant association. Conversely if we get the chi-square value less than the critical chi-square value we fail to reject the null hypothesis and conclude that there is no association between the observed variables. From above test results we can see that all results are found to be significant thus we can reject the null hypothesis and interpret that there is significant influence of investment experience on investment pattern.

H_0-There is no significant association between sources of information and investment pattern

H_1:-There is significant association between sources of information and investment pattern.

Dependent Variable (Sources of information)	**Independent Variable**	**Chi-Square Statistics**	**Df**	**P-value**	**Result**
Dependency on the following for Accurate Investment[Brokers]	Amount Currently Blocked in Shares (Equities)	109.249	12	.000	Significant
Dependency on the following for Accurate Investment[Brokers]	Number of Companies that Make Your Portfolio	35.531	8	.000	Significant

Dependency on the following for Accurate Investment[Brokers]	What is the Annual Percentage of Profit made by You by Investing in Shares	103.900	12	.000	Significant
Dependency on the following for Accurate Investment[Brokers]	Type of Stocks that You Associate Yourself with/Prefer	116.080	12	.000	Significant
Dependency on the following for Accurate Investment[Brokers]	When You Invest in Equity Market You	64.571	12	.000	Significant
Dependency on the following for Accurate Investment[Brokers]	Your Investment in Equities Usually Comprises of Investment for	109.602	12	.000	Significant
Dependency on the following for Accurate Investment [Tips]	Amount Currently Blocked in Shares (Equities)	177.833	12	.000	Significant
Dependency on the following for Accurate Investment [Tips]	Number of Companies that Make Your Portfolio	123.572	8	.000	Significant
Dependency on the following for Accurate Investment [Tips]	What is the Annual Percentage of Profit made by You by Investing in Shares	78.028	12	.000	Significant
Dependency on the following for Accurate Investment [Tips]	Type of Stocks that You Associate Yourself with/Prefer	159.37	12	.000	Significant

Dependency on the following for Accurate Investment [Tips]	When You Invest in Equity Market You	86.08	12	.000	Significant
Dependency on the following for Accurate Investment [Tips]	Your Investment in Equities Usually Comprises of Investment for	207.227	12	.000	Significant
Dependency on the following for Accurate Investment [News Papers and Magazines]	Amount Currently Blocked in Shares (Equities)	143.04	12	.000	Significant
Dependency on the following for Accurate Investment [News Papers and Magazines]	Number of Companies that Make Your Portfolio	98.455	8	.000	Significant
Dependency on the following for Accurate Investment [News Papers and Magazines]	What is the Annual Percentage of Profit made by You by Investing in Shares	96.992	12	.000	Significant
Dependency on the following for Accurate Investment [News Papers and Magazines]	Type of Stocks that You Associate Yourself with/Prefer	158.139	12	.000	Significant
Dependency on the following for Accurate Investment [News Papers and Magazines]	When You Invest in Equity Market You	123.807	12	.000	Significant
Dependency on the following for Accurate Investment [News Papers and Magazines]	Your Investment in Equities Usually Comprises of Investment for	79.28	12	.000	Significant

Dependency on the following for Accurate Investment [Friends and Family]	Amount Currently Blocked in Shares (Equities)	69.435	12	.000	Significant
Dependency on the following for Accurate Investment [Friends and Family]	Number of Companies that Make Your Portfolio	136.425	8	.000	Significant
Dependency on the following for Accurate Investment [Friends and Family]	What is the Annual Percentage of Profit made by You by Investing in Shares	37.907	12	.000	Significant
Dependency on the following for Accurate Investment [Friends and Family]	Type of Stocks that You Associate Yourself with/Prefer	117.952	12	.000	Significant
Dependency on the following for Accurate Investment [Friends and Family]	When You Invest in Equity Market You	85.384	12	.000	Significant
Dependency on the following for Accurate Investment [Friends and Family]	Your Investment in Equities Usually Comprises of Investment for	110.891	12	.000	Significant
Dependency on the following for Accurate Investment [Company Fundamentals]	Amount Currently Blocked in Shares (Equities)	56.407	12	.000	Significant
Dependency on the following for Accurate Investment [Company Fundamentals]	Number of Companies that Make Your Portfolio	55.618	8	.000	Significant

Dependency on the following for Accurate Investment [Company Fundamentals]	What is the Annual Percentage of Profit made by You by Investing in Shares	86.156	12	.000	Significant
Dependency on the following for Accurate Investment [Company Fundamentals]	Type of Stocks that You Associate Yourself with/Prefer	154.563	12	.000	Significant
Dependency on the following for Accurate Investment [Company Fundamentals]	When You Invest in Equity Market You	131.963	12	.000	Significant
Dependency on the following for Accurate Investment [Company Fundamentals]	Your Investment in Equities Usually Comprises of Investment for	103.456	12	.000	Significant
Dependency on the following for Accurate Investment [Others]	Amount Currently Blocked in Shares (Equities)	153.993	12	.000	Significant
Dependency on the following for Accurate Investment [Others]	Number of Companies that Make Your Portfolio	86.505	8	.000	Significant
Dependency on the following for Accurate Investment [Others]	What is the Annual Percentage of Profit made by You by Investing in Shares	218.61	12	.000	Significant
Dependency on the following for Accurate Investment [Others]	Type of Stocks that You Associate Yourself with/Prefer	181.981	12	.000	Significant

Dependency on the following for Accurate Investment [Others]	When You Invest in Equity Market You	332.623	12	.000	Significant
Dependency on the following for Accurate Investment [Others]	Your Investment in Equities Usually Comprises of Investment for	145.574	12	.000	Significant

The researcher wants to test the association between sources of information and investment pattern. Hence researcher has undertaken Chi-Square cross tabulation analysis (goodness of fit). If the Chi-Square value is greater than critical chi-square value obtained from Chi-square distribution based on degrees of freedoms then we reject the null hypothesis of no significant association between the observed two variables and we can say there is significant association. Conversely if we get the chi-square value less than the critical chi-square value we fail to reject the null hypothesis and conclude that there is no association between the observed variables. As researcher is testing at the significance level of 99% P-value less than 0.01 is considered as significant. Thus we can infer that if our p-value for particular testing of hypothesis is less than 0.01 then we reject the null hypothesis. Moreover from our above test results it is evidently clear that there is significant influence of sources of information on the investment pattern, as almost all the variables are significantly impacting the dependent variables.

H_0: Retail investors do not prefer equity investment to other investment avenues

H_1: Retail investors prefer equity investment to other investment avenues

Researcher has used Garrett's Ranking method to understand the preference ranking of investment avenues.

Computation of Garrett's Value (Returns & Additional Perks)

Investment Avenues	Garrett's Total Score	Percentage Score	Rank
State the Investment Avenues Preferred by You In Terms of RETURNS AND ADDITIONAL PERKS [Equity Shares]	58780	58.78	1
State the Investment Avenues Preferred by You In Terms of RETURNS AND ADDITIONAL PERKS [Bonds and Debentures]	55737	55.737	4
State the Investment Avenues Preferred by You In Terms of	52761	52.761	6

RETURNS AND ADDITIONAL PERKS [Others]			
State the Investment Avenues Preferred by You In Terms of RETURNS AND ADDITIONAL PERKS [Real Estate]	52075	52.075	7
State the Investment Avenues Preferred by You In Terms of RETURNS AND ADDITIONAL PERKS [Bank Deposits]	56335	56.335	3
State the Investment Avenues Preferred by You In Terms of RETURNS AND ADDITIONAL PERKS [Precious Metals]	55659	55.659	5
State the Investment Avenues Preferred by You In Terms of RETURNS AND ADDITIONAL PERKS [Derivatives]	49634	49.634	8
State the Investment Avenues Preferred by You In Terms of RETURNS AND ADDITIONAL PERKS [Mutual Funds]	58088	58.088	2

Computation of Garrett's Value (Easy Liquidation)

Investment Avenues	Garrett's Total Score	Percentage Score	Rank
Which of the Following Would You Prefer Taking Into Account Easy Liquidation of the Instrument [Equity Shares]	60520	60.52	1
Which of the Following Would You Prefer Taking Into Account Easy Liquidation of the Instrument [Bonds and Debentures]	56485	56.485	3
Which of the Following Would You Prefer Taking Into Account Easy Liquidation of the Instrument [Others]	54620	54.62	5
Which of the Following Would You Prefer Taking Into Account Easy Liquidation of the Instrument [Real Estate]	50513	50.513	8
Which of the Following Would You Prefer Taking Into Account Easy Liquidation of the Instrument [Bank Deposits]	56188	56.188	4
Which of the Following Would You Prefer Taking Into Account Easy Liquidation of the Instrument [Precious Metals]	51562	51.562	7
Which of the Following Would You Prefer Taking Into Account Easy Liquidation of the Instrument [Derivatives]	52853	52.853	6
Which of the Following Would You Prefer Taking Into Account Easy Liquidation of the Instrument [Mutual Funds]	59893	59.893	2

Computation of Garrett's Value (Further Investment)

Investment Avenues	Garrett's Total Score	Percentage Score	Rank
Select the Instruments You Would Consider for Investing Further [Equity Shares]	59300	59.3	1
Select the Instruments You Would Consider for Investing Further [Bonds and Debentures]	52982	52.982	6

Select the Instruments You Would Consider for Investing Further [Others]	51668	51.668	7
Select the Instruments You Would Consider for Investing Further [Real Estate]	53290	53.29	5
Select the Instruments You Would Consider for Investing Further [Bank Deposits]	55964	55.964	3
Select the Instruments You Would Consider for Investing Further [Precious Metals]	54940	54.94	4
Select the Instruments You Would Consider for Investing Further [Derivatives]	50193	50.193	8
Select the Instruments You Would Consider for Investing Further [Mutual Funds]	59231	59.231	2

According to Garrett's ranking the researcher analyses the preferences of investors in terms of different investment avenues. As per the ranking it can be seen that equity is the most preferred investment in terms of returns and additional perks, liquidation and further investment.

11. Findings & Conclusion

1. Investing in stocks has become coherent to be understood by a lay person. The reason for this can be attributed to digitalisation of the exchange as well as the transfer of securities which can be done electronically.
2. The SEBI with a view to motivate investors into investing in shares, has been conducting various educative programmes on investing and has made norms which are stringent so as to avoid scams.
3. People in the city of Mumbai who invested in the stock market came from distinct backgrounds and age groups and had a tendency to save and invest.
4. There were fewer female investors and the age group of respondents investing in equities was extensive.
5. A large number of investors investing in shares belonged to the commerce discipline and a miniscule percentage to the arts discipline.
6. The time duration of being invested differed as some preferred to remain invested in shares for a short duration and some for a longer duration.
7. The perspectives and priorities of investing was different across all age groups.
8. An association was found between income earned and investment decision making of retail investors

9. The experience level of investors was diverse. Some investors were novice on the market although they were older in age. They were a few investors who had been investing since a longer duration and had a considerable amount of experience.
10. The experience also had an impact on the risk profile of the investors as the more experience they had they could handle risk appropriately. The stock market being a risky avenue due to its volatility only once the risk appetite is decided, investors venture to invest in this market.
11. The priorities change with age, it is possible for the youth to make risky investment decisions but as the person ages the risk appetite of the person decreases as it is essential for him to save for the future wellbeing. There was also alteration in the amount blocked in equities, number of companies and sectors invested.
12. The study revealed that demographic variables also influenced the investment pattern in the stock market. Investors varying in age, gender, education and income groups approached the stock market with a distinct perception and their choices differed in terms of the stocks, companies, amount invested.
13. Investors have been growing in the stock market with each passing day. The perks in terms of dividends and bonus along with capital appreciation has made it the most preferred investment type followed by other avenues like mutual funds.
14. The investment pattern and the decisions of retail investors, the number of companies they chose, the sectors they invested, changed depending on the sources of information they relied on.
15. Investors also took advice from friends and family members who had knowledge about investing in shares whereas others reckoned on brokers and financial advisors.

12. Recommendations

1. The investor before entering the stock market should be aware of all the terms and terminologies and basics so as to develop an appropriate trading strategy.
2. It is essentials for any investor to thoroughly check the facts about the company he is investing shares in, if it has active shares on the exchange, the current price, trading volume, if it is a market leader as well as its future plans.

3. Investors should carefully analyse and only rely on authentic and reliable information before investing in any instrument as these decisions may prove to be catastrophic and difficult to reverse if not taken diligently.
4. It is necessary also check the reserves, the dividend declared, the annual reports, the profits retained or if it has declared initial public offers.
5. Careful attention should be paid to see if the company is involved in any defaults or scams in the past.
6. The investor should also do a thorough risk profiling to analyse the amount of risk he can bare as the market is prone to volatility.
7. It is essential be patient and calm and not take decisions in haste as it can be difficult to undo a trading decision.
8. Investors should read all the SEBI guidelines so as to be updated with the reforms and latest information as well as all documents concerning their transactions.

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